



NSRP

National Shipbuilding Research Program

Commonality Working Group (CWG)

2017 Panel Projects

PSMC Spring Meeting - Tysons, VA

April 25-27, 2017



NSRP Collaboration



- Manage and focus **national shipbuilding and ship repair research & development funding** on technologies and processes that will:
 - **Reduce the total ownership cost** of ships for the U.S. Navy, other national security customers and the commercial sector
 - Develop and leverage **best commercial and naval practices** to improve the efficiency of the U.S. shipbuilding and ship repair industry
- Provide a **collaborative framework** to improve shipbuilding-related technical and business processes





Executive Control Board



Executive Director & Staff (ATI)



Extended Team

Major Initiatives

Ship Design & Material Technologies

Ship Production Technologies

Business Processes & Information Technologies

Infrastructure & Support

Commonality Working Group (CWG)

Panels

Ship Design & Material Technologies

Electrical Technologies

Business Processes

Environmental

Ship Warfare Systems Integration

Planning, Production Processes & Facilities

Information Technologies

Risk Management

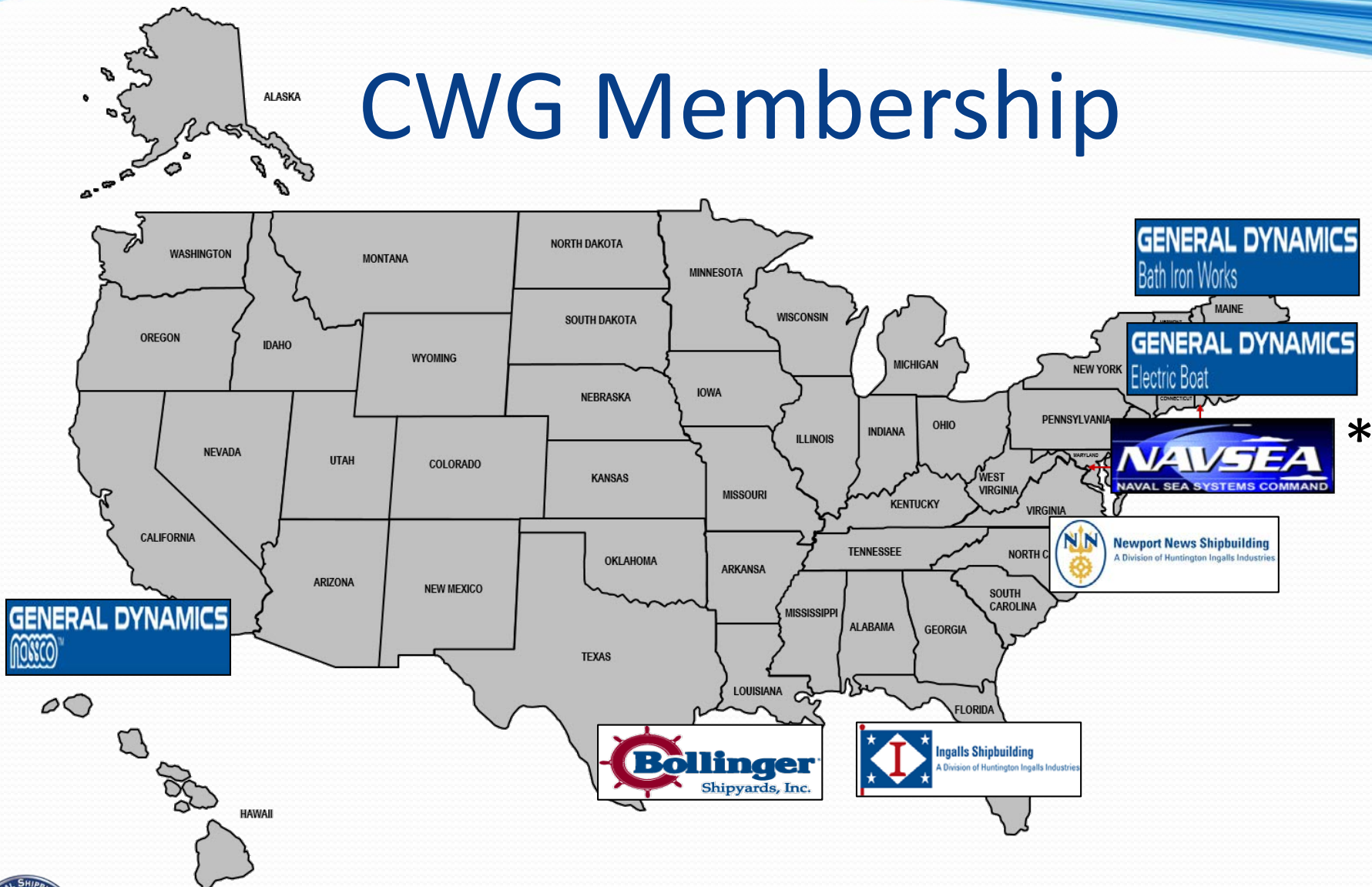
Surface Preparation & Coatings

Workforce Development

Welding Technology

Ad Hoc Group

CWG Membership



* NAVSEA 06C, Enterprise Commonality Office



CWGW Objectives

Established by the NSRP to accomplish the following:

- Identify the top barriers preventing material commonality across platforms and between shipyards
- Provide recommendations and a phased approach for overcoming each of the barriers identified
- Begin taking action to eliminate the barriers through panel projects and RA projects



September 22, 2016 -- The Executive Control Board of the National Shipbuilding Research Program (NSRP) selected 17 panel projects for award:

- CWG was awarded 3 Panel Projects
 - Commodity Variation and Standardization Analysis on Navy 525 Valves
 - Providing Shipbuilding Suppliers with Digital Design and Manufacturing Information
 - Develop Common Supplier Technical Assessment Criteria and Scoring Methodology

Today we will discuss the 2nd and 3rd projects



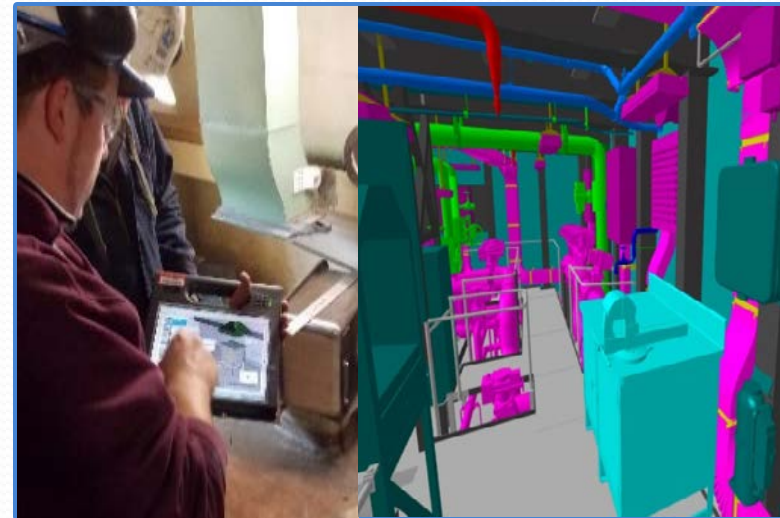
Providing Shipbuilding Suppliers with Digital Design and Manufacturing Information

- Project Lead: HII – Newport News
- Team Members: HII-Ingalls, GD-Electric Boat, GD-Bath Iron Works, GD-NASSCO, Bollinger, NSWCCD
- Period of Performance: Jan. 2017 – Nov. 2017
- Objective: Define the requirements for providing shipbuilding suppliers with digital design and manufacturing information. Identify a secure exchange medium readily accessible by suppliers for retrieving digital information during procurement process.
- Deliverables/Benefits: Reduce program costs by replacing 2D drawings with 3D digital design info



Project Plan

- Review existing visualization software options (e.g. Siemens JT, 3D PDF, etc) and provide recommendation
- Evaluate current options for establishing a secure exchange medium for SYs to provide digital info to suppliers
- Define the process for providing suppliers with digital design and manufacturing information
- Publish a final report identifying recommendations for implementation



Accomplishments

- Contracts with all participants are place.
- Subject Matter Experts from each shipyard have been identified.
- The team held a kick-off meeting on Jan. 18, 2017 at HII-NNS.
- Several potential test parts have been selected.
- The team has reviewed previous related work including the CPC Task 2 Study and Lifecycle Integrated Data Environment project results.



Next Steps

- A face to face meeting to discuss a supplier interface.
- The team is identifying the various modeling software, file formats, ERP software, PLM software and secure exchange mediums that are currently being used or considered for future use by the shipyards.

	Newport News	Electric Boat	Ingalls	Bath Iron Works	Bollinger
CAD Software					
3D Visualization					
File formats					
PLM Software					
ERP Software					
Secure Data Exchange					

Next Steps (cont'd)

- Potential Use Cases are being captured across the value stream.

SHIPYARD	
Designer	Develop 3D Component model Apply Product Manufacturing Information (PMI) Create electronic Bill of Material (EBOM) Generate 3D Design Disclosure
Material Cataloger	Create Part Numbers Apply specifications, technical requirements and manufacturer qualification requirements
Procurement Analyst	Generates request for quote Issue Purchase Order
Supplier / Receipt Inspection	Inspect item, component, or assembly
Logistics Support	
SUPPLIER	
Contract Administrator	Provide cost estimates/vendor quotes Administer purchase order acceptance
Shop Planner	Create Work Packages Establish build sequencing Develop shop routing
Procurement Analyst	Purchase raw material and other items/components as required
Designer	
CNC Operator Programmer	
Craftsman	
Quality Assurance Inspectors	
GOVERNMENT	
???	

Next Steps (cont'd)

- Identify the specific design and manufacturing information required by suppliers to support fabrication and inspection in the absence of a 2D build-to-print drawing.
- Identify specific commodities/drawings that are good candidates and then develop 3D component models with the PMI necessary for manufacturing.
 - Including notes, tolerance tables, etc.
- These derivatives will then be provided to multiple suppliers to review and provide feedback.
- Working with Boeing to schedule a phone call with the project lead to determine level of interaction.
- Would welcome additional participation from PSMC members.



Develop Common Supplier Technical Assessment Criteria and Scoring Methodology

- Project Lead: HII – Newport News
- Team Members: HII-Ingalls, GD-Electric Boat, GD-Bath Iron Works, Bollinger, NAVSEA 05-06, NSWCCD
- Period of Performance: Jan. 2017 – Nov. 2017
- Objective: Establish standard criteria for identifying complex/critical and risky parts and suppliers. Share assessments amongst shipyards. Manage more suppliers as a team to reduce risk.
- Deliverables: Standardized technical assessment criteria and scoring methodology process guide
- Benefits: Reduce overall cost, minimize supplier burden, improve quality of parts and effectively increase complex/critical supply base



Project Plan

- Review current practices by participating shipyards for invoking a Supplier Technical Assessment
- Develop scoring/ranking methodology to identify a part's strength, weakness, risk, etc.
- Benchmark companies with a proven Supplier Technical Assessment
- Standardize Supplier Technical Assessment criteria and scoring methodology from benchmarking and data
- Develop a final standard Supplier Technical Assessment process guide for participating shipyards



Accomplishments

- Contracts with all participants are place.
- Subject Matter Experts from each shipyard have been identified.
- A bi-monthly teleconference schedule has been established
- NAVSEA has developed a technical assessment process in procuring Critical Safety Items (CSI's) that was modeled after the process used by NAVAIR



Accomplishments (cont'd)

- Investigated issues in regard to sharing assessments
 - Contract information (price, schedule, etc.) cannot be shared
 - Supplier assessments will only include technical information
- Supplier Technical Assessment procedures have been provided by NNS and NAVSEA



Next Steps

- Benchmarking visit is scheduled for May 8-10 with Raytheon Missile Systems, Tucson, AZ
- Boeing has agreed to assist with benchmarking and they have been sent a base set of questions and the project white paper to get the process started.
- Requesting other companies that have supplier technical assessment processes for benchmarking
- Complete Best practice comparisons of the Supplier Technical Assessment processes



CWG Continues to Accomplish its Objectives

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2017 Panel Project Solicitation

- The deadline for Panel Chairs and Ad Hoc Groups to submit their reviewed and selected white papers and signed verification letter is 12:00 pm on August 10, 2017
- The NSRP Executive Control Board (ECB) regularly allocates funding for projects which are solicited through the NSRP Panels and meet the following criteria:
 - Duration: 12 months or less
 - Funding: \$150K or less
 - Focus: Should align with the mission of one or more of the Panels/Ad Hoc groups
 - Participation: At least one member should be a project participant – *multiple shipyard participation is strongly encouraged*



2017 Panel Project Process

- White Paper Submission and Selection
 - Proposers submit white papers to CWG Chair
 - CWG members review and prioritize white papers
 - Chair submits final white papers (up to 3) selection to NSRP Executive Director
 - Executive reviews with Navy Sponsors and for technical and cost compliance
 - Complete white paper portfolio is presented by the chairs to the ECB for selection and award

For more information – nsrp.org





Questions?